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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,151	02/13/2004	Takatoshi Nishizawa	Q79502	4040

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EXAMINER
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KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/777,151

Applicant(s)

NISHIZAWA ET AL.

Examiner

Kevin R. Kruer

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 21, 2006 has been entered.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 2, 4, 5 and 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuhmann et al (US 5,851,640) in view of Ueda (EP 0613919 A1) and Beck et al (US 5,214,024).

Schuhmann teaches a transparent, biaxially oriented multi-layer polypropylene film comprising a core layer and at least one top layer on one or more sides of the core (abstract). The core preferably comprises a polypropylene resin and calcium carbonate

Art Unit: 1773

particles (col 3, lines 34+). The core may further comprise antistatic agents (col 9, lines 15+). Herein, the core is understood to read on the claimed "intermediate layer." The top layers also comprise polypropylene and an antistatic agent (col 9, lines 15+) and are herein understood to read on the claimed "printing layer." The top layers may be subjected to corona treatment (herein understood to read on the claimed "activation treatments") in order to improve the film's ink adhesion (col 11, lines 14+). Said ink is herein understood to read on the claimed "pigment coating layer" of claim 15.

Schuhmann teaches that the multi-layer film may comprise an antistatic agent, but does not teach that the antistatic should comprises the claimed "non-transfer antistatic agent." However, Ueda teaches an antistatic which may be utilized in a polypropylene composition (page 9, lines 34-42). The anti-static composition taught in Ueda comprises the following:

- |             |  |
|-------------|--|
| Component A | a polyolefin resin (55-95wt%)                    |
| Component B | a polyetheresteramide antistatic agent (3-40wt%) |
| Component C | a polyamide resin (1-20wt%) and                  |
| Component D | a compatilizer (0.02-20wt%)                      |

The antistatic agent further comprises at least 0.01wt% of an alkali metal halide (page 4, lines 25+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the polyetheresteramide antistatic agent (in the taught amounts) taught in Ueda as the anti-static agent taught in Schuhmann. The motivation for doing so would have been Ueda teaches that polyetheresteramide anti-

Art Unit: 1773

static agent is compatible with propylene, has a high heat resistance, permanently retains its anti-static properties, and does not rinse away in the presence of water.

Ueda further teaches that the polyamide of component C increases the surface orientation of the polyetheresteramide anti-static agent (page 6, lines 38-47). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the polyamide taught in Ueda (in the taught amounts) to the layers of the film taught in Schuhmann. The motivation for doing so would have been because Ueda teaches that polyamides (in the taught amounts) increase the surface orientation of the antistatic agent.

Ueda also teaches that a compatilizer is preferably utilized in order to improve compatibility with the resin, prevent interlaminar peeling of molded articles obtained, and improve the mechanical strength and appearance of the final product (page 6, lines 55-61). When polypropylene is utilized as the thermoplastic resin, preferred compatilizers include modified low molecular weight polyolefins (page 7, lines 21-29) and ionomer (page 6, lines 20+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add one of said compatilizers (in the taught amounts) to the layers of the multi-layer film taught in Schuhmann. The motivation for doing so would have been to prevent interlaminar peeling and improve compatibility between the polypropylene and the anti-static agent.

Schuhmann also does not teach that the antistatic agent should be excluded from the surface layers and concentrated in the core layer. However, Beck teaches a thermoplastic film comprising an antistatic agent. Beck teaches that it is desirable that a

Art Unit: 1773

thermoplastic film has a surface resistivity of less than  $1 \times 10^{13} \Omega/\text{square}$  in order to avoid charge build up (col 2, lines 9+) but that the addition of an antistatic agent to a surface layer can deteriorate desirable properties of said layer (col 2, lines 20+). To avoid the deterioration of the desired surface film properties, Beck teaches that the antistatic agent may be added to the film layer below the surface layer without loss of the desired surface resistance (col 3, lines 7+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to exclude antistatic agent from the surface of the film taught in Schuhmann and concentrate said antistatic agent in the underlying film. The motivation for doing so would have been to avoid deterioration of the surface film properties while maintaining the desired surface resistivity.

Neither Schuhmann nor Ueda teaches the claimed surface resistivity. However, Beck teaches that it is desirable for a thermoplastic film to have a surface resistivity of less than  $1 \times 10^{13} \Omega/\text{square}$  so that the film will not build up charge (col 2, lines 9+). Furthermore, Ueda teaches that the surface resistivity of the composition is a result effective variable that is dependent upon the amount of antistatic agent is added to the composition. The courts have held that that it is not inventive to discover the optimum or workable range by routine experimentation when the general conditions of the claimed invention are disclosed in the prior art (See MPEP 2141.05). In the present situation, Ueda teaches that surface resistivity decreases as the amount of antistatic agent is increased. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the amount of antistatic agent added to the core layer of the film taught in Schuhmann in order to obtain a film with a surface

Art Unit: 1773

resistivity of less than  $1 \times 10^{13} \Omega/\text{square}$ . The motivation for doing so would have been to optimize the surface resistivity of the laminate so that said film does not build up charge.

With respect to claim 4, Schuhmann does not teach that the printing layer should have the claimed ink adhesion strength. However, Schuhmann does teach that ink adhesion increases with corona treatment. The courts have held that that it is not inventive to discover the optimum or workable range by routine experimentation when the general conditions of the claimed invention are disclosed in the prior art (See MPEP 2141.05). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the corona treatment conditions of the film taught in Schuhmann. The motivation for doing so would have been to optimize the adhesion of the ink that is applied thereto.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuhmann et al (US 5,851,640) in view of Ueda and Beck et al, as applied to claims 1-5 and 7-20 above, and further in view of Almog et al (US 6,767,588)

Schuhmann in view of Ueda is relied upon as above but does not teach that a coating agent having an ink adhesion properties. However, Almog teaches that adhesion between an ink and a corona treated propylene substrate may be improved by applying a primer layer thereto (col 1, lines 13+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a primer to the corona treated surface layer taught in Schuhmann prior to application of an ink. The motivation for doing so would have been to improve the adhesion between the ink and the substrate.

***Response to Arguments***

Applicant's arguments filed February 21, 2006 have been fully considered but are not persuasive.

Applicant argues Schuhmann does not disclose the surface resistivity of claim 1 as amended. The examiner agrees, but notes Schuhmann is not relied upon for such a teaching. Rather, Beck is relied upon to render said limitation obvious in order to make the thermoplastic sheet of Schuhmann static dissipative. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues Schuhmann does not disclose, indicate, suggest, or foreshadow the use of the non-transfer antistatic agents of the present invention. The examiner agrees, but notes Schuhmann was never relied upon for such a teaching. Rather, Ueda was relied upon to motivate one of ordinary skill in the art at the time the invention was made to add the claimed non-transfer antistatic agent to the laminate taught in Schuhmann. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).



Applicant further argues Schuhmann fails to teach, indicate, suggest, or foreshadow a multilayer laminate wherein a non-transfer agent is contained only in the intermediate layers. Said argument is noted, but is not persuasive because Schuhmann was never solely relied upon for such a teaching. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With respect to Ueda, Applicant argues said reference teaches the use of the claimed antistatic agent in injection molded articles, which are entirely different than the multilayer thermoplastic resin film of the present invention. The examiner respectfully disagrees. Ueda teaches an antistatic agent useful for imparting anti-static properties to thermoplastic resins (see page 1, lines 1+). The teachings of Ueda are in no way limited to molded compositions.

With respect to Beck, Applicant argues there are significant differences between Beck's receiver sheet for dye diffusion thermal transfer printing and the multi-layer thermoplastic resin film of the present invention. Specifically, Applicant argues the receiver sheet of Beck is a coating, not a film as the present invention discloses. Applicant further notes the conductive layer of Beck is a coating, not a film as in the present invention. Said differences are noted but are not significant enough to render the reference non-analogous. Both Beck and Schuhmann are drawn to multi-layer films wherein the films are printable and desirably have antistatic properties. Schuhmann

Art Unit: 1773

teaches antistatic agent may be incorporated into any layer of the multilayer film. Beck teaches the antistatic layer desirably is not incorporated into the printable surface layers and that desirable surface resistivity may be obtained by incorporating antistatic materials into intermediate (non-surface) layers. Thus, the examiner maintains the position that Beck provides ample motivation to one of ordinary skill in the art at the time the invention was made to add antistatic agents to the core (non-surface) layers of the laminate taught in Schuhmann. By doing so, the skilled artisan would expect to be able to control the surface resistivity of the laminate without deteriorating the properties of the surface films.

With respect to claim 6, Applicant argues said claim is allowable for the same reasons claims 1, 2, 5, and 7-20 are allowable. Said arguments are not persuasive for the reasons noted above.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,140,268 teaches adding antistatic layer to a layer below the surface layer of a multi-layer film.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1773

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773